HYPOTHERMIA...

you'll catch your death of cold.

No. 1

Hypothermia is a serious cooling of body 'core' temperature, (below the normal 37°), caused by:

- over exposure to cold, wet, or windy weather
- immersion in cold water

On Land

Surprisingly, most cases of Hypothermia on land occur in wet and windy weather with temperatures between 0°-10°C. Because people are more familiar with cold temperatures on land, Hypothermia symptoms are often overlooked until it is 'too late'.

In Cold Water

Your body loses heat much faster in cold water than on land. Hypothermia begins literally within minutes after you enter cold water.

Anyone can get Hypothermia, and in severe conditions, anyone can die from it.

PREVENTION IS THE BEST PROTECTION — be aware of what happens to your body in the cold and what you can do about it.

Visible Signs

A person with any of these conditions could be suffering from Hypothermia:

Mild:

- shivering
- violent or uncontrollable shivering (often accompanied by fatigue)

Severe:

- difficulty speaking, thinking, or performing complex tasks
- irrational behavior, stiffened muscles
- unconsciousness, absence of reflexes

In the final stages of Hypothermia, loss of coordination and confused or irrational behavior may cause the victim to appear drunk.

What Happens to the Body

In a cold environment the body automatically begins shivering to generate extra heat. The body will also restrict blood circulation to the arms, legs, and skin. This peripheral cooling helps to slow the loss of heat from vital internal organs.

As the cold gradually invades the body the Hypothermia victim loses the ability to shiver and will cool even faster. As body temperature continues to fall, there is an increased risk of heart fibrillation (a rapid, erratic, and inefficient heartbeat), or cardiac arrest. Death by heart and breathing failure normally occurs when body temperature falls below 27°C.

What To Do
In Cold Water

Try To Remain Calm. Panic and thrashing about in cold water wastes precious body heat.

Don't Remove Your Clothes. Clothing reduces the flow of cold water over the skin, which helps decrease heat loss.

Always Wear A Ministry Of Transport (MOT) Approved Lifejacket or PFD (Personal Flotation Device) When Boating. Besides keeping you afloat if you're injured or unconscious after a boating accident, a lifejacket or PFD will help conserve body heat and energy that would be rapidly lost if you were forced to tread water or swim.

Never Try To Swim Long Distances In Cold Water (Less Than 15°C). Loss of body heat, particularly from the head, neck and chest, is very rapid during immersion in cold water. Use anything available (an overturned boat or debris etc.) to keep your body out of the water as much as possible. This applies especially to children and the elderly because their bodies lose heat very rapidly in the cold.

Conserve Heat. Use the Heat Escape Lessening Posture (HELP) to conserve body heat until help arrives. If there are several people in the water, adopt the 'Group Huddle'. If you don't have a lifejacket or PFD, treading water is better than drownproofing or swimming because it will keep your head out of the water and more effectively conserve body heat.

On Land

If you or your companions begin to experience the symptoms of Hypothermia, or if you are faced with any cold weather survival situation, your priorities are:

- find or make a shelter for protection against the wind, rain, or cold.
- stay as dry as possible.
- use anything at your disposal to make a fire and keep it burning.
- keep an eye on all your companions to make sure they don't wander off.
- signal for help (smoke, flares, whistle, mirrors, etc).

Drinking warm liquids to guard against dehydration, and eating high energy foods will increase your chances for survival. Change into dry clothes if possible and cover yourself with anything that is waterproof, windproof, and provides good insulation.

If you are lost or safety is too far away, stay put! Don't leave your shelter and wander aimlessly looking for help — you're just increasing the threat of Hypothermia and making it more difficult for search parties to find you.

Treatment

Assess the victim's condition. A body temperature of 30°C or less is very serious and requires special attention. Absence of shivering, a weak pulse, shallow breathing, or a semi-conscious state are all indications of severe Hypothermia.

Do not rely on the victim's behavior. He may say 'I'm Okay', but he's probably in no condition to assess his physical state. The cold 'numbs the brain' as well as the body and causes mental confusion. If you're not sure, assume that the victim has severe Hypothermia.

In most cases, the victim's body core temperature will continue to drop immediately following rescue from a cold environment. This 'afterdrop' can trigger fatal heart fibrillation or cardiac arrest.

It's not enough to cover the victim with a blanket — a source of heat must be provided. REWARMING SHOULD ALWAYS BE GRADUAL. Handle the victim GENTLY at all times and do not exercise or massage cold arms and legs; a sudden recirculation of cold blood increases the danger of heart fibrillation.

These are the preferred rewarming methods:

Mild Hypothermia

- allow the victim to rest in a shelter out of the weather and near a source of heat.
- provide a change of dry clothes.
- warm sweet liquids only if victim is conscious.
- warm baths are advised only for very mild cases of Hypothermia, and even then, the victim's arms and legs should be kept out of the water to prevent a sudden recirculation of blood and the risk of heart fibrillation.

DANGERS: Cigarettes and alcohol actually inhibit the rewarming process and should not be given to the victim.

Severe Hypothermia

- send someone for medical help if possible.
- place warm objects (warm, wrapped rocks or hot water bottles, etc) near the head, neck, and chest; cover the victim and replace warm objects as they cool. Wet clothing need not be removed if you can provide the victim with good insulation and a waterproof covering.
- you can also donate your own body heat to the victim. Cover yourself and the victim in something warm and waterproof, and concentrate on chest-to-chest contact.
- a warm, moist air inhaler is an effective method because it replaces heat and moisture directly to the body core, but this specialized equipment is not usually available in emergency situations.
- provide warm liquids only when the victim is conscious and able to drink without choking.
- don't give up, even if the victim appears dead. There are many documented cases of 'lifeless' Hypothermia victims being successfully revived, even after complete submersion in cold water for more than 20 minutes. Do not consider the victim dead until qualified medical personnel have attempted to revive him.

Dangers

USE CPR* (CARDIO PULMONARY RESUSCITATION) ONLY WHEN ABSOLUTELY NECESSARY.
A cold body requires less oxygen than normal and unnecessary stimulation of the heart and lungs may lead to cardiac arrest. Check carefully for signs of pulse and breathing (usually very faint in severe Hypothermia). If there is no sign of pulse and breathing after two minutes, begin CPR at a slower than normal rate.

DON'T TRY TO REWARM THE VICTIM IF IT APPEARS THAT HIS HEART AND BREATHING HAVE STOPPED. Victims of near-death Hypothermia need special medical attention during the rewarming process. Donate some heat to the victim (enough to prevent further body core cooling) and cover the victim with something warm and waterproof. Application of a slower than normal rate of CPR will help maintain minimal oxygen levels in the body during transportation to a medical facility.

NOTE: If you cannot take the victim to a medical facility and you're forced to attempt rewarming yourself, very gradually increase the rate of CPR to normal while donating more and more heat to the victim. Provide as much shelter from the weather as possible.

* CPR should be attempted only by those people familiar with the technique. Contact your local St. John Ambulance or Nursing Station for information about CPR instruction.

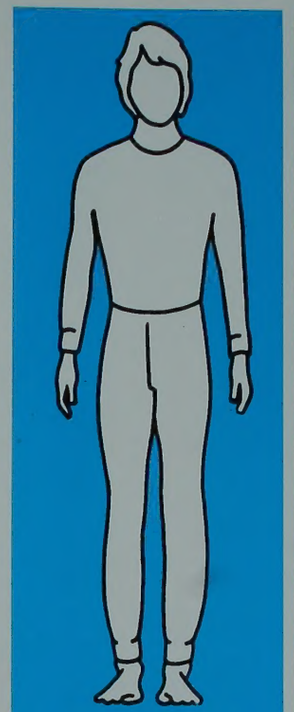
Prevention

BEING PREPARED FOR THE COLD IS THE BEST PROTECTION AGAINST HYPOTHERMIA.

- stay as dry as possible.
- dress warmly for the cold (wear several 'layers' of clothing and cover high heat loss areas of the body such as the head and neck).
- Take a change of clothes on excursions (stored in a waterproof bag to stay dry and a rainsuit or slicker to wear in the event of rain and wind. Unlike down-filled or cotton clothes, wool will keep you warm even when wet.
- in addition to a first aid kit, carry a basic survival kit. Most of these items can be stored in an empty coffee can or small mess container:

Long burning candles, flashlight, waterproof matches, fire starter, emergency blanket (compact heat reflector sheet), whistle, distress flares, emergency rations including tea & sugar, dehydrated soup, sharp knife, small axe or saw, signal mirror, snare wire, fishing line & lures.

- avoid travelling over ice in the late spring or early fall.
- always let someone know where you have gone and when you expect to return.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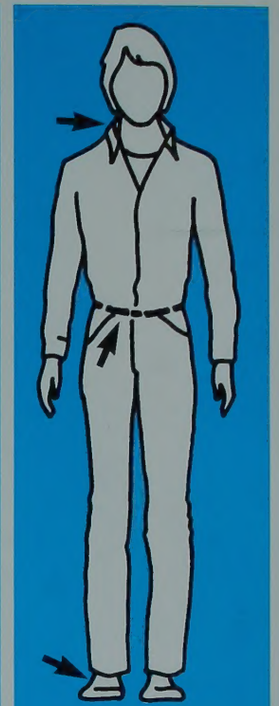
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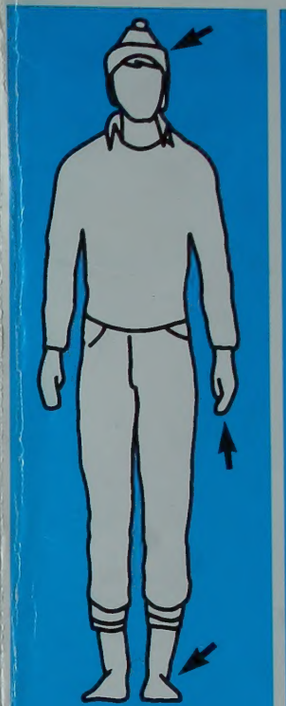
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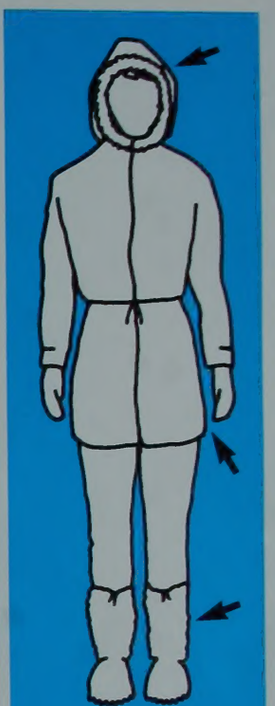
Fourth Layer

First Layer
A layer of underwear covers all core areas. Only head, neck, hands and feet do not receive this first layer.

Second Layer
1. open neck to prevent perspiration build-up and allow control of body heat.
2. belt at the waist to keep out cold air.
3. wool socks.

Third Layer
1. toque to prevent heat loss from the head.
2. mitts to protect hands from frostbite.
3. second pair of wool socks.

Fourth Layer
1. hood for added head protection.
2. parka with drawstring to keep out cold air.
3. high, lined boots.

Northwest Territories Health

Health and Welfare Canada